What is claimed is:

1. An optical glass for precision press molding characterized by comprising essential components in the form of P_2O_5, Nb_2O_5, WO_3, TiO_2, Bi_2O_3, Li_2O, and Na_2O; comprising optional components in the form of B_2O_3, BaO, ZnO, K_2O, Sb_2O_3, and As_2O_3; where the content of Bi_2O_3 exceeds 4 weight percent but does not exceed 15 molar percent; the content of Li_2O exceeds 3 weight percent but does not exceed 15 weight percent; the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O, Na_2O, and K_2O is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (nd) is from 1.75 to 2.0; and the Abbé number (νd) is from 18 to 30.

2. An optical glass for precision press molding characterized by comprising essential components in the form of P_2O_5, Nb_2O_5, WO_3, TiO_2, Bi_2O_3, Li_2O, Na_2O, and B_2O_3; comprising optional components in the form of BaO, ZnO, K_2O, Sb_2O_3, and As_2O_3; where the content of Bi_2O_3 is from 0.5 to 15 molar percent; the content of Li_2O exceeds 3 weight percent but does not exceed 15 weight percent; the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O, Na_2O, and K_2O is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (nd) is from 1.75 to 2.0; and the Abbé number (νd) is from 18 to 30.

3. An optical glass for precision press molding characterized by comprising essential components in the form of P_2O_5, Nb_2O_5, WO_3, TiO_2, Bi_2O_3, Li_2O, Na_2O; comprising optional components in the form of B_2O_3, BaO, ZnO, K_2O, Sb_2O_3, and As_2O_3; where the content of WO_3 is less than 15 weight percent; the content of Bi_2O_3 is from 0.5 to 15 molar percent; the content of Li_2O exceeds 3 weight percent but does not exceed 15 weight percent; the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O, Na_2O, and K_2O is less than or equal to 42

molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (nd) is from 1.75 to 2.0; and the Abbé number (*v*d) is from 18 to 30.

4. An optical glass characterized by comprising 16 to 30 molar percent of P_2O_5, 5 to 25 molar percent of Nb_2O_5, 1 to 40 molar percent of WO_3, 1 to 10 molar percent of TiO_2, 0.5 to 15 molar percent of Bi_2O_3 (where Bi_2O_3 exceeds 4 weight percent and the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent), 4 to 25 molar percent of Li_2O (but exceeding 3 weight percent), 4 to 25 molar percent of Na_2O, 0 to 15 molar percent of K_2O (where the combined quantity of Li_2O, Na_2O and K_2O is less than or equal to 42 molar percent), 0 to 15 molar percent of B_2O_3, 0 to 15 molar percent of BaO, 0 to 12 molar percent of ZnO, 0 to 1 molar percent of Sb_2O_3, and 0 to 1 molar percent of As_2O_3; and in that the combined quantity of the above components is greater than or equal to 98 molar percent.

5. An optical glass characterized by comprising 16 to 30 molar percent of P_2O_5, 5 to 25 molar percent of Nb_2O_5, 1 to 40 molar percent of WO_3, 1 to 10 molar percent of TiO_2, 0.5 to 15 molar percent of Bi_2O_3 (where the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent), 4 to 25 molar percent of Li_2O (but exceeding 3 weight percent), 4 to 25 molar percent of Na_2O, 0 to 15 molar percent of K_2O (where the combined quantity of Li_2O, Na_2O and K_2O is less than or equal to 42 molar percent), more than 0 but less than or equal to 15 molar percent of B_2O_3, 0 to 15 molar percent of BaO, 0 to 12 molar percent of ZnO, 0 to 1 molar percent of Sb_2O_3, and 0 to 1 molar percent of As_2O_3; and in that the combined quantity of the above components is greater than or equal to 98 molar percent.

6. An optical glass characterized by comprising 16 to 30 molar percent of P_2O_5, 5 to 25 molar percent of Nb_2O_5, 1 to 40 molar percent of WO_3 (but less than 15 weight percent), 1 to 10 molar percent of TiO_2, 0.5 to 15 molar percent of Bi_2O_3 (where the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent), 4 to

25 molar percent of Li_2O (but exceeding 3 weight percent), 4 to 25 molar percent of Na_2O, 0 to 15 molar percent of K_2O (where the combined quantity of Li_2O, Na_2O and K_2O is less than or equal to 42 molar percent), 0 to 15 molar percent of B_2O_3, 0 to 15 molar percent of BaO, 0 to 12 molar percent of ZnO, 0 to 1 molar percent of Sb_2O_3, and 0 to 1 molar percent of As_2O_3; and in that the combined quantity of the above components is greater than or equal to 98 molar percent.

7. The optical glass according to claim 4, wherein the refractive index (nd) is from 1.75 to 2.0 and the Abbé number (*v*d) is from 18 to 30.

8. The optical glass according to claim 5, wherein the refractive index (nd) is from 1.75 to 2.0 and the Abbé number (*v*d) is from 18 to 30.

9. The optical glass according to claim 6, wherein the refractive index (nd) is from 1.75 to 2.0 and the Abbé number (*v*d) is from 18 to 30.

10. A precision press molding preform comprised of the optical glass according to claim 1.

11. A precision press molding preform comprised of the optical glass according to claim 2.

12. A precision press molding preform comprised of the optical glass according to claim 3.

13. A precision press molding preform comprised of the optical glass according to claim 4.

14. A precision press molding preform comprised of the optical glass according to claim 5.

15. A precision press molding preform comprised of the optical glass according to claim 6.

16. A precision press molding preform comprised of the optical glass according to claim 7.

17. A precision press molding preform characterized:

by being comprised of an optical glass having essential components in the form of P_2O_5, Nb_2O_5, WO_3, TiO_2, Bi_2O_3, Li_2O, and Na_2O; optional components in the form of B_2O_3, BaO, ZnO, K_2O, Sb_2O_3, and As_2O_3; where the content of Bi_2O_3 exceeds 4 weight percent but does not exceed 15 molar percent; the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O, Na_2O, and K_2O is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (nd) is from 1.75 to 2.0; and the Abbé number (*v*d) is from 18 to 30;

in that a gob of the glass in a molten state has been solidified; and

in that the preform has been shaped without mechanical processing.

18. A preform for precision glass molding characterized:

by being comprised of an optical glass having essential components in the form of P_2O_5, Nb_2O_5, WO_3, TiO_2, Bi_2O_3, Li_2O, Na_2O, and B_2O_3; optional components in the form of BaO, ZnO, K_2O, Sb_2O_3, and As_2O_3; where the content of Bi_2O_3 is from 0.5 to 15 molar percent; the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O, Na_2O, and K_2O is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (nd) is from 1.75 to 2.0; and the Abbé number (*v*d) is from 18 to 30;

in that a gob of the glass in a molten state has been solidified; and

in that the preform has been shaped without mechanical processing.

19. A preform for precision glass molding characterized:

by being comprised of an optical glass having essential components in the form of P_2O_5, Nb_2O_5, WO_3, TiO_2, Bi_2O_3, Li_2O, Na_2O; comprising optional components in the form of B_2O_3, BaO, ZnO, K_2O, Sb_2O_3, and As_2O_3; where the content of WO_3 is less than 15 weight percent; the content of Bi_2O_3 is from 0.5 to 15 molar percent; the content of Li_2O exceeds 3 weight percent but does not exceed 15 weight percent; the combined quantity of Nb_2O_5, WO_3, TiO_2, and Bi_2O_3 is from 25 to 45 molar percent; the combined quantity of Li_2O, Na_2O, and K_2O is less than or equal to 42 molar percent; the combined quantity of the essential components and optional components is greater than or equal to 98 molar percent; the refractive index (nd) is from 1.75 to 2.0; and the Abbé number (νd) is from 18 to 30;

in that a gob of the glass in a molten state has been solidified; and

in that the preform has been shaped without mechanical processing.

20. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 1.

21. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 2.

22. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 3.

23. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 4.

24. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 5.

25. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 6.

26. A method of manufacturing a press molding preform characterized by comprising the steps of:

separating a prescribed weight of glass melt from a glass melt flow, and

forming a press molding preform comprised of this prescribed weight of the optical glass according to claim 7.

27. An optical element comprised of the optical glass according to claim 1, which is in the form of a precision press-molded article.

28. An optical element comprised of the optical glass according to claim 2, which is in the form of a precision press-molded article.

29. An optical element comprised of the optical glass according to claim 3, which is in the form of a precision press-molded article.

30. An optical element comprised of the optical glass according to claim 4, which is in the form of a precision press-molded article.

31. An optical element comprised of the optical glass according to claim 5, which is in the form of a precision press-molded article.

32. An optical element comprised of the optical glass according to claim 6, which is in the form of a precision press-molded article.

33. An optical element comprised of the optical glass according to claim 7, which is in the form of a precision press-molded article.

34. An optical element obtained by precision press molding the precision press molding preform according to claim 10.

35. An optical element obtained by precision press molding the precision press molding preform according to claim 11.

36. An optical element obtained by precision press molding the precision press molding preform according to claim 12.

37. An optical element obtained by precision press molding the precision press molding preform according to claim 13.

38. An optical element obtained by precision press molding the precision press molding preform according to claim 14.

39. An optical element obtained by precision press molding the precision press molding preform according to claim 15.

40. An optical element obtained by precision press molding the precision press molding preform according to claim 16.

41. An optical element obtained by precision press molding the precision press molding preform according to claim 17.

42. An optical element obtained by precision press molding the precision press molding preform according to claim 18.

43. An optical element obtained by precision press molding the precision press molding preform according to claim 19.

44. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 20.

45. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 21.

46. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 22.

47. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 23.

48. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 24.

49. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 25.

50. An optical element obtained by precision press molding a precision press molding preform manufactured by the method of manufacturing according to claim 26.

51. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 10 is heated and precision press molded.

52. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 11 is heated and precision press molded.

53. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 12 is heated and precision press molded.

54. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 13 is heated and precision press molded.

55. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 14 is heated and precision press molded.

56. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 15 is heated and precision press molded.

57. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 16 is heated and precision press molded.

58. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 17 is heated and precision press molded.

59. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 18 is heated and precision press molded.

60. A method of manufacturing an optical element characterized in that the precision press molding preform according to claim 19 is heated and precision press molded.

61. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 20 is heated and precision press molded.

62. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 21 is heated and precision press molded.

63. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 22 is heated and precision press molded.

64. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 23 is heated and precision press molded.

65. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 24 is heated and precision press molded.

66. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 25 is heated and precision press molded.

67. A method of manufacturing an optical element characterized in that a precision press molding preform manufactured by the method of manufacturing according to claim 26 is heated and precision press molded.

68. The method of manufacturing an optical element according to claim 51 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

69. The method of manufacturing an optical element according to claim 52 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

70. The method of manufacturing an optical element according to claim 53 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

71. The method of manufacturing an optical element according to claim 54 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

72. The method of manufacturing an optical element according to claim 55 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

73. The method of manufacturing an optical element according to claim 56 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

74. The method of manufacturing an optical element according to claim 57 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

75. The method of manufacturing an optical element according to claim 58 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

76. The method of manufacturing an optical element according to claim 59 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

77. The method of manufacturing an optical element according to claim 60 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

78. The method of manufacturing an optical element according to claim 61 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

79. The method of manufacturing an optical element according to claim 62 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

80. The method of manufacturing an optical element according to claim 63 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

81. The method of manufacturing an optical element according to claim 64 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

82. The method of manufacturing an optical element according to claim 65 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

83. The method of manufacturing an optical element according to claim 66 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

84. The method of manufacturing an optical element according to claim 67 wherein the preform is introduced into a pressing mold, both the pressing mold and preform are heated together, and precision press molding is conducted.

85. The method of manufacturing an optical element according to claim 51 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

86. The method of manufacturing an optical element according to claim 52 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

87. The method of manufacturing an optical element according to claim 53 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

88. The method of manufacturing an optical element according to claim 54 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

89. The method of manufacturing an optical element according to claim 55 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

90. The method of manufacturing an optical element according to claim 56 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

91. The method of manufacturing an optical element according to claim 57 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

92. The method of manufacturing an optical element according to claim 58 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

93. The method of manufacturing an optical element according to claim 59 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

94. The method of manufacturing an optical element according to claim 60 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

95. The method of manufacturing an optical element according to claim 61 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

96. The method of manufacturing an optical element according to claim 62 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

97. The method of manufacturing an optical element according to claim 63 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

98. The method of manufacturing an optical element according to claim 64 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

99. The method of manufacturing an optical element according to claim 65 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

100. The method of manufacturing an optical element according to claim 66 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.

101. The method of manufacturing an optical element according to claim 67 wherein the pressing mold and preform are separately heated, the preheated preform is introduced into the pressing mold, and precision press molding is conducted.